APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/065,745	RIJAVEC, NENAD
	Examiner	Art Unit
	Peter K. Huntsinger	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 August 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 8/25/06 have been fully considered but they are not

persuasive.

The applicant argues on pages 2 and 3 of the response in essence that:

Paragraphs 10 and 26 of the publication disclose the limitations of claims 10 and

11.

a.   Paragraphs 10 and 26 do not teach disconnecting RIP machines or the

sequencer remaining unchanged by additions and removals of raster image

processors.

The applicant argues on pages 3 and 4 of the response in essence that:

None of the references teach the limitations of claims 10 and 11.

b.   Venkateswar et al. disclose a sequencer (main processor 52) being

connected to raster image processors (parallel processors 54) (Fig. 2a). Further,

the claims 10 and 11 are rejected under 35 U.S.C. 112.

The applicant argues on pages 3 and 4 of the response in essence that:

Claims 10 and 11 provide the disclosure of an advantage for the design choice

rejection of claim 1.

c.   The limitations of claims 10 and 11 are not described in the applicant's

specification and are rejected under 35 U.S.C. 112.

The applicant argues on pages 4 and 5 of the response in essence that:

The patentability of claim 1 is not being considered as a whole.

 d. Barry et al. disclose a sequencer (instruction operator for job file 114 of

Fig. 1a) which has an output port networked and communicating with the input

ports of said plurality of raster image processors (col. 4, lines 34-40). Barry et al.

do not disclose expressly a sequencer directly connected to the input ports of the

raster image processors. At the time of the invention, it would have been obvious

to a person of ordinary skill in the art to directly connect the sequencer with the

input ports of the raster image processors. Applicant has not disclosed that

directly connecting the sequencer with the input ports of the raster image

processors provides an advantage, is used for a particular purpose or solves a

stated problem. One of ordinary skill in the art, furthermore, would have

expected applicant's invention to perform equally well with a distributor

connecting the sequencer and the raster image processors because both

designs perform the same function of parsing and distributing the images to the

raster image processors.

 The applicant argues on page 5 of the response in essence that:

The fact that a prior art reference can be modified to show the patented invention

does not make the modification obvious unless the prior art reference suggests

the desirability of the modification.

e.   The modification of Barry et al. is shown to be obvious by the design

choice rejection, which does not require Barry et al. to disclose the desirability of

the modification.

The applicant argues on pages 6 and 7 of the response in essence that:

Barry et al. do not teach a print server.

f.   Barry et al. disclose control PC 1020 (Fig. 10, col. 15, lines 10-28). This

computer controls printer 1026 and thus can be considered a print server.

The applicant argues on pages 6 and 7 of the response in essence that:

Fuji et al. does not teach multiple print head drivers between a print server and a

printer.

g.   Barry et al. disclose a print head driver between a server and a printer

(print driver 102 of Fig. 1a, col. 3, lines 13-15). Barry et al. do not disclose

expressly a plurality of head drivers. Fujii et al. disclose a plurality of print head

drivers, each of which controls the application of colorant to a sheet and has an

input port receiving data signals; a rasterizer with an output port communicating

with the input ports of said plurality of print head driver; and generating data

signals to be communicated to said print head drivers (col. 6, lines 60-65). Barry

et al. and Fujii et al. are combinable because they are from the same field of

printing systems. At the time of the invention, it would have been obvious to a

person of ordinary skill in the art to process rasterized data for print head drivers.

The motivation for doing so would have been allow driving a plurality of ink jet nozzles to form an image. Each individual print head driver corresponds to a separate color of the printer.

The applicant argues on pages 8 and 9 of the response in essence that:

None of the references teach communicating queued packaged print stream data portions directly over a network.

h.   Venkateswar et al. disclose communicating queued packaged print stream data portions directly over a network (col. 2, lines 21-28). The data portions are disclosed to be communicated and inherently must be connected by some means which would constitute a network.

The applicant argues on page 9 of the response in essence that:

None of the references teach adding or removing raster image processor at the sequencer output port as recited in claims 10 and 11.

i.   The limitations of claims 10 and 11 are not described in the applicant's specification and are rejected under 35 U.S.C. 112.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3.   Claims 10 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention. Claims 10 and 11 include the limitation

wherein said raster image processors may be disconnected to said sequencer output

port, and also said sequencer remaining unchanged by additions and removals of

connected and disconnected said raster image processors. Neither of these limitations

is described in the applicant's specification.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

Claim 9 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. Claim 9 recites a program product comprising

a computer readable medium. The claim language should be changed to claim a

computer readable medium comprising a program product.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Barry et al. U.S. Patent 6,825,943 and Fujii et al. U.S. Patent 6,315,390.

        Referring to claim 1, Barry et al. disclose an apparatus comprising: a pipeline of

elements processing print control data and having: a plurality of raster image

processors, each of which has an input port receiving parsed page data (Rip engines

150, 152, and 154 of Fig. 1b, col. 1, lines 41-50); and a sequencer (instruction operator

for job file 114 of Fig. 1a) which has an output port networked and communicating with

the input ports of said plurality of raster image processors (col. 4, lines 34-40) and an

input port receiving a print data stream (col. 3, lines 19-22), said sequencer monitoring

data flows among the pipelined elements and parsing a print data stream into local data

portions related to individual pages and global state data portions related to

characteristics shared across a plurality of pages (col. 4, lines 52-62), said sequencer

packaging together parsed page local and global state data portions (col. 4, lines 34-

40); said raster image processors processing in parallel packaged parsed page data

related to a plurality of pages (col. 2, lines 9-20). Barry et al. do not disclose expressly

a sequencer directly connected to the input ports of the raster image processors. At the

time of the invention, it would have been obvious to a person of ordinary skill in the art

to directly connect the sequencer with the input ports of the raster image processors.

Applicant has not disclosed that directly connecting the sequencer with the input ports

of the raster image processors provides an advantage, is used for a particular purpose

or solves a stated problem. One of ordinary skill in the art, furthermore, would have

expected applicant's invention to perform equally well with a distributor connecting the

sequencer and the raster image processors because both designs perform the same

function of parsing and distributing the images to the raster image processors. Barry et

al. do not disclose expressly a plurality of head drivers. Fujii et al. disclose a plurality of

print head drivers, each of which controls the application of colorant to a sheet and has

an input port receiving data signals; a rasterizer with an output port communicating with

the input ports of said plurality of print head driver; and generating data signals to be

communicated to said print head drivers (col. 6, lines 60-65). Barry et al. and Fujii et al.

are combinable because they are from the same field of printing systems. At the time of

the invention, it would have been obvious to a person of ordinary skill in the art to

process rasterized data for print head drivers. The motivation for doing so would have

been allow driving a plurality of ink jet nozzles to form an image. Each individual print

head driver corresponds to a separate color of the printer. Therefore, it would have

been obvious to combine Fujii et al. with Barry et al. to obtain the invention as specified

in claim 1.

Referring to claim 3, Fujii et al. disclose an apparatus according to claim 1

wherein each of said raster image processors converts data from a form communicated

as a print data stream to a form to be communicated as data signals to a print head

driver (col. 6, lines 60-65).

7.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et

al. U.S. Patent 6,825,943 and Fujii et al. U.S. Patent 6,315,390 as applied to claim 1

above, and further in view of Venkateswar et al. U.S. Patent 6,532,016.

Referring to claim 2, Barry et al. and Fujii et al. disclose rasterizing images and

generating data signals communicated to a print head driver, but do not disclose

expressly a raster queue. Venkateswar et al. disclose queuing packaged individual

page data to be communicated to said raster image processors and further wherein

individual ones of said raster image processors draw from said queued data as

processing of data related to an individual page is completed (col. 2, lines 21-28). Barry

et al., Fujii et al., and Venkateswar et al. are combinable because they are from the

same field of printing systems. At the time of the invention, it would have been obvious

to a person of ordinary skill in the art to queue data designated for a plurality of

rasterizers. The motivation for doing so would have been to increase the speed of

image rasterization by preparing images designated for rasterization before the

rasterizer requests new data. Therefore, it would have been obvious to combine

Venkateswar et al. with Barry et al. and Fujii et al. to obtain the invention as specified in

claim 2.

8.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et

al. U.S. Patent 6,825,943 and Fujii et al. U.S. Patent 6,315,390 as applied to claim 3

above, and further in view of Hohensee et al. U.S. Patent 5,946,460.

Referring to claim 4, Barry et al. disclose raster image processors but do not disclose expressly converting into a variable number of portions depending on whether a page is to be blank, single colored, or multiple colored. Hohensee disclose each of said raster image processors converts data from a form communicated as a print data stream into a variable number of portions depending upon whether an individual page is to be blank or to be printed with a single color or to be printed with multiple colors (col. 4, lines 53-60). Barry et al. and Hohensee et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a rasterizer to convert into a variable number of portions depending on whether a page is to be blank, single colored, or multiple colored. The motivation for doing so would have been to produce a separate bitmap for each color of ink required to print the page. Therefore, it would have been obvious to combine Hohensee et al. with Barry et al. to obtain the invention as specified in claim 4.

9.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et al. U.S. Patent 6,825,943, Fujii et al. U.S. Patent 6,315,390, and Hohensee et al. U.S. Patent 5,946,460.

Referring to claim 5, Barry et al. disclose an apparatus comprising: a pipeline of elements connected between a printer server and a printer and processing print control data from said print server, and said pipeline of elements having: a plurality of raster image processors, each of which has an input port receiving parsed page data (Rip

engines 150, 152, and 154 of Fig. 1b, col. 1, lines 41-50); and a sequencer (instruction

operator for job file 114 of Fig. 1a) which has an output port networked and

communicating with the input ports of said plurality of raster image processors (col. 4,

lines 34-40) and an input port receiving a print data stream (col. 3, lines 19-22), said

sequencer monitoring data flows among the pipelined elements and parsing a print data

stream into local data portions related to individual pages and global state data portions

related to characteristics shared across a plurality of pages (col. 4, lines 52-62), said

sequencer packaging together parsed page local and global state data portions (col. 4,

lines 34-40); said raster image processors processing in parallel packaged parsed page

data related to a plurality of pages (col. 2, lines 9-20). Barry et al. disclose a print head

driver between a server and a printer (print driver 102 of Fig. 1a, col. 3, lines 13-15) but

does not disclose expressly a plurality of head drivers. Fujii et al. disclose a plurality of

print head drivers, each of which controls the application of colorant to a sheet and has

an input port receiving data signals; a rasterizer with an output port communicating with

the input ports of said plurality of print head driver; and generating data signals to be

communicated to said print head drivers (col. 6, lines 60-65). Barry et al. and Fujii et al.

are combinable because they are from the same field of printing systems. At the time of

the invention, it would have been obvious to a person of ordinary skill in the art to

process rasterized data for print head drivers. The motivation for doing so would have

been allow driving a plurality of ink jet nozzles to form an image. Each individual print

head driver corresponds to a separate color of the printer. Barry et al. do not disclose

expressly converting into a variable number of portions depending on whether a page is

to be blank, single colored, or multiple colored. Hohensee disclose each of said raster

image processors converts data from a form communicated as a print data stream into

a variable number of portions depending upon whether an individual page is to be blank

or be printed with a single color or to be printed with multiple colors (col. 4, lines 53-60).

Barry et al. and Hohensee et al. are combinable because they are from the same field

of printing systems. At the time of the invention, it would have been obvious to a person

of ordinary skill in the art to utilize a rasterizer to convert into a variable number of

portions depending on whether a page is to be blank, single colored, or multiple colored.

The motivation for doing so would have been to produce a separate bitmap for each

color of ink required to print the page. Therefore, it would have been obvious to

combine Hohensee et al. with Barry et al. and Fujii et al. to obtain the invention as

specified in claim 5.

10.   Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry

et al. U.S. Patent 6,825,943, Fujii et al. U.S. Patent 6,315,390, and Venkateswar et al.

U.S. Patent 6,532,016.

Referring to claims 6 and 9, Barry et al. disclose a method comprising the steps

of: receiving a print data stream from a print server and parsing the stream into local

(col. 4, lines 34-38) and global portions (col. 4, lines 26-30); packaging together parsed

local and global print stream data portions (col. 5, lines 8-13). Barry et al. do not

disclose expressly a raster queue. Venkateswar et al. disclose queuing packaged print

stream data portions; and communicating queued packaged print stream data portions

directly to a plurality of raster image processors (col. 2, lines 21-28). Barry et al. and

Venkateswar et al. are combinable because they are from the same field of printing

systems. At the time of the invention, it would have been obvious to a person of

ordinary skill in the art to queue data designated for a plurality of rasterizers. The

motivation for doing so would have been to increase the speed of image rasterization by

preparing images designated for rasterization before the rasterizer requests new data.

Barry et al. disclose processing a plurality of communicated packaged print stream data

portions in parallel but do not disclose expressly a plurality of head drivers. Fujii et al.

disclose generating print head driving data signals; and communicating the generated

print head driving data signals to a printer and to the print heads of said printer (col. 6,

lines 60-65). Barry et al. and Fujii et al. are combinable because they are from the

same field of printing systems. At the time of the invention, it would have been obvious

to a person of ordinary skill in the art to process rasterized data for print head drivers.

The motivation for doing so would have been allow driving a plurality of ink jet nozzles

to form an image. Each individual print head driver corresponds to a separate color of

the printer. Therefore, it would have been obvious to combine Fujii et al. with Barry et

al. and Venkateswar et al. to obtain the invention as specified in claims 6 and 9.

Referring to claim 7, Barry et al. disclose a method according to claim 6 wherein

said step of packaging print stream data portions comprises packaging portions

applicable to individual pages (col. 7, lines 34-36).

Referring to claim 8, Barry et al. disclose a method according to claim 6 wherein

said step of processing comprises generating bit map data signals (col. 10, lines 59-60).

11.   Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Barry et al. U.S. Patent 6,825,943 and Fujii et al. U.S. Patent 6,315,390 as applied

to claims 1 and 5 above, and in further view of Venkateswar et al. U.S. Patent

6,532,016.

Referring to claims 10 and 11, Barry et al. disclose the sequencer and raster

image processors but do not disclose expressly the sequencer being connected to the

raster image processors. Venkateswar et al. disclose a sequencer (main processor 52)

being connected to raster image processors (parallel processors 54) (Fig. 2a). Barry et

al. and Venkateswar et al. are combinable because they are from the same field of

printing systems. At the time of the invention, it would have been obvious to a person of

ordinary skill in the art to connect the master processor with the parallel processors.

The motivation for doing so would have been to eliminate the need for a separate

component to separate and distribute data. Barry et al. further disclose wherein said

raster image processors may be connected and disconnected, said sequencer

remaining unchanged by additions and removals of connected and disconnected said

raster image processors (col. 5, lines 38-45). Therefore, it would have been obvious to

combine Venkateswar et al. with Barry et al. to obtain the invention as specified in
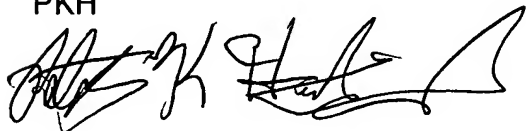
claims 10 and 11.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter K. Huntsinger whose telephone number is (571)272-7435. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on (571)272-7471. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PKH

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